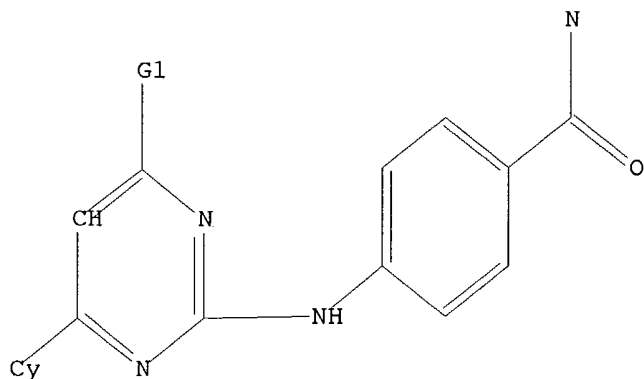


10/004,642

=> d l4
L4 HAS NO ANSWERS
L4 STR



G1 H, Me, Et, n-Pr, i-Pr, n-Bu, i-Bu, s-Bu, t-Bu

Structure attributes must be viewed using STN Express query preparation.

=> s l4 sss full
FULL SEARCH INITIATED 17:09:30 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 12653 TO ITERATE

100.0% PROCESSED 12653 ITERATIONS 523 ANSWERS
SEARCH TIME: 00.00.01

L5 523 SEA SSS FUL L4

| | | |
|--|------------|---------|
| => file caplus | | |
| COST IN U.S. DOLLARS | SINCE FILE | TOTAL |
| | ENTRY | SESSION |
| FULL ESTIMATED COST | 155.42 | 403.27 |
| DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS) | SINCE FILE | TOTAL |
| | ENTRY | SESSION |
| CA SUBSCRIBER PRICE | 0.00 | -13.23 |

FILE 'CAPLUS' ENTERED AT 17:09:36 ON 11 AUG 2004
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FILE COVERS 1907 - 11 Aug 2004 VOL 141 ISS 7
FILE LAST UPDATED: 10 Aug 2004 (20040810/ED)

10/004,642

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s 15

L6 18 L5

=> d 16 1-18 ibib abs hitstr

L6 ANSWER 1 OF 18 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2004:451634 CAPLUS

DOCUMENT NUMBER: 141:23544

TITLE: Preparation of anilinopyrimidines as JNK pathway inhibitors for treating or preventing an inflammatory or metabolic condition

INVENTOR(S): Satoh, Yoshitaka; Bhagwat, Shripad S.

PATENT ASSIGNEE(S): USA

SOURCE: U.S. Pat. Appl. Publ., 161 pp., Cont.-in-part of U.S. Ser. No. 4,645. = 10/395,811

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

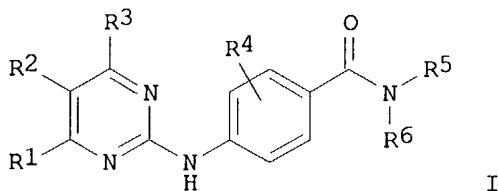
FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|-----------------|-------------|
| US 2004106634 | A1 | 20040603 | US 2003-395811 | 20030324 |
| US 2003220330 | A1 | 20031127 | US 2001-4645 | 20011204 |
| PRIORITY APPLN. INFO.: | | | US 2000-251904P | P 20001206 |
| | | | US 2001-4645 | A2 20011204 |

OTHER SOURCE(S): MARPAT 141:23544

GI



AB The title compds. [I; R1 = (un)substituted (hetero)aryl; R2, R3 = H, alkyl; R4 = halo, OH, alkyl, alkoxy; R5, R6 = R8, (CH2)aCOR9, (CH2)aCO2R9, etc.; or NR5R6 = (un)substituted heterocycle; R8, R9 = H, alkyl, aryl, etc.; a = 0-4] having activity as inhibitors of the JNK pathway, were prepared E.g., a multi-step synthesis of I [R1 = 4-ClC6H4; R2-R6 = H] having an IC50 of $\leq 10 \mu\text{M}$ in the JNK2 assay, was given. Such compds. I have utility in the treatment of a wide range of conditions that are responsive to JNK inhibition (such as obesity).

IT 434945-83-2P 434947-59-8P 434947-63-4P

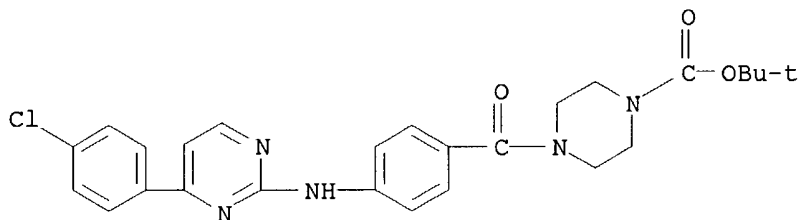
RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(preparation of anilinopyrimidines as JNK pathway inhibitors for treating or preventing an inflammatory or metabolic condition)

10/004,642

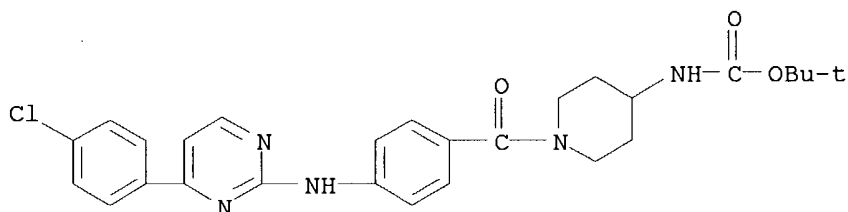
RN 434945-83-2 CAPLUS

CN 1-Piperazinecarboxylic acid, 4-[4-[[4-(4-chlorophenyl)-2-pyrimidinyl]amino]benzoyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



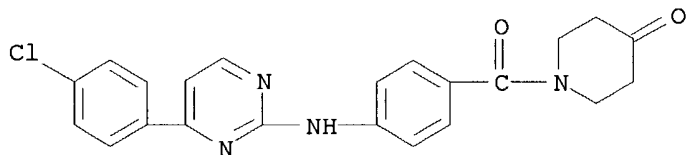
RN 434947-59-8 CAPLUS

CN Carbamic acid, [1-[4-[[4-(4-chlorophenyl)-2-pyrimidinyl]amino]benzoyl]-4-piperidinyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



RN 434947-63-4 CAPLUS

CN 4-Piperidinone, 1-[4-[[4-(4-chlorophenyl)-2-pyrimidinyl]amino]benzoyl]- (9CI) (CA INDEX NAME)



IT 434944-82-8P 434944-84-0P 434944-85-1P
434944-86-2P 434944-87-3P 434944-88-4P
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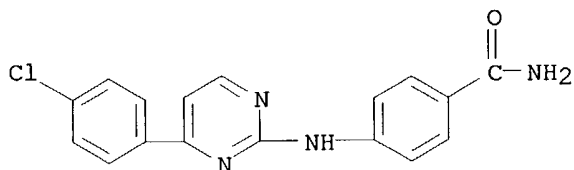
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434947-33-8P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU
 (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES
 (Uses)

(preparation of anilinopyrimidines as JNK pathway inhibitors for treating or
 preventing an inflammatory or metabolic condition)

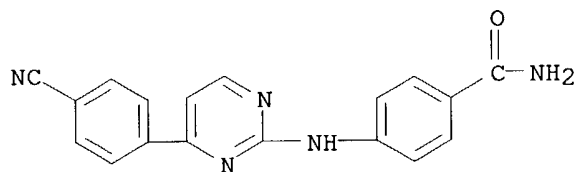
RN 434944-82-8 CAPLUS

CN Benzamide, 4-[[4-(4-chlorophenyl)-2-pyrimidinyl]amino]- (9CI) (CA INDEX
 NAME)



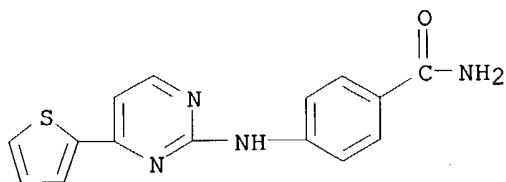
RN 434944-84-0 CAPLUS

CN Benzamide, 4-[[4-(4-cyanophenyl)-2-pyrimidinyl]amino]- (9CI) (CA INDEX
 NAME)



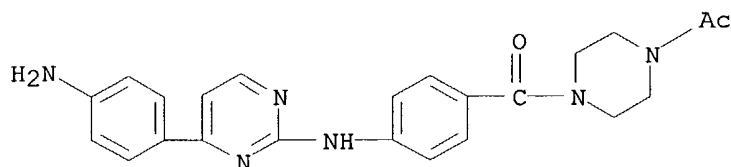
RN 434944-85-1 CAPLUS

CN Benzamide, 4-[[4-(2-thienyl)-2-pyrimidinyl]amino]- (9CI) (CA INDEX NAME)



RN 434944-86-2 CAPLUS

CN Benzamide, 4-[[4-(5-fluoro-2-hydroxyphenyl)-2-pyrimidinyl]amino]- (9CI)
 (CA INDEX NAME)



L6 ANSWER 2 OF 18 CAPLUS COPYRIGHT 2004 ACS on STN
 ACCESSION NUMBER: 2004:354948 CAPLUS
 DOCUMENT NUMBER: 140:357361
 TITLE: Preparation of pyrazolopyridazines as GSK-3 kinase inhibitors for treating Type II Diabetes
 INVENTOR(S): Dickerson, Scott Howard; Tavares, Francis Xavier; Zhou, Huiqiang
 PATENT ASSIGNEE(S): Smithkline Beecham Corporation, USA
 SOURCE: PCT Int. Appl., 136 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|----------|
| WO 2004035588 | A1 | 20040429 | WO 2003-US32473 | 20031014 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |

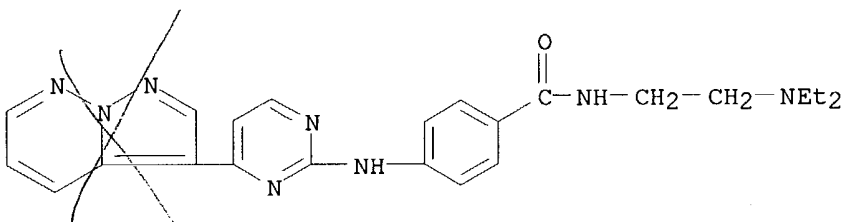
PRIORITY APPLN. INFO.: US 2002-418522P P 20021015
 OTHER SOURCE(S): MARPAT 140:357361
 GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Title compds. I [wherein D = N, CH; R1 = (un)substituted hetero/aryl; n = 1 or 2; R2 = H, alk(en/yn)yl, haloalkyl, cycloalkyl, halo, heterocyclyl, hetero/aryl, CN, azido, NO2, OH and derivs., CO2H and derivs., CONH2 and derivs., NH2 and derivativesS(O)qH and derivs., etc.; q = 0-2; R3 = Qp-Q1; Q = O, NH and derivs., S(O)q; p = 0 or 1; Q1 = ar/cyclo/halo/alkyl, heteroaryl, (un)substituted aryl, etc.; their salts, solvates, and physiol. functional derivs.] were prepared as GSK3 kinase inhibitors for treating Type II Diabetes mellitus. For example, II was prepared by cycloaddn. of 1-aminopyridazinium iodide (preparation given) with 3-butyn-2-one in CH2Cl2, reaction of the methylketone with DMF di-tert-butylacetal in DMF, and cyclocondensation of the α , β -unsatd. ketone with N-cyclopropylguanidine•0.5H2SO4 (preparation given) in DMF in the presence of K2CO3. I displayed pIC50 values > 5.0 for the inhibition of GSK3

10/004,642

kinase.
IT **551920-05-9P**, N-[2-(Diethylamino)ethyl]-4-[(4-pyrazolo[1,5-b]pyridazin-3-yl-2-pyrimidinyl)amino]benzamide
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(GSK3 inhibitor; preparation of pyrazolopyridazines as GSK-3 inhibitors for treating Type II Diabetes)
RN 551920-05-9 CAPLUS
CN Benzamide, N-[2-(diethylamino)ethyl]-4-[(4-pyrazolo[1,5-b]pyridazin-3-yl-2-pyrimidinyl)amino]- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 3 OF 18 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2004:41464 CAPLUS

DOCUMENT NUMBER: 140:111424

TITLE: Preparation of phenyl-[4-(3-phenyl-1H-pyrazol-4-yl)-pyrimidin-2-yl]-amines as protein tyrosine kinase inhibitors

INVENTOR(S): Furet, Pascal; Imbach, Patricia; Ramsey, Timothy Michael; Schlapbach, Achim; Scholz, Dieter; Caravatti, Giorgio

PATENT ASSIGNEE(S): Novartis A.-G., Switz.; Novartis Pharma G.m.b.H.

SOURCE: PCT Int. Appl., 96 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

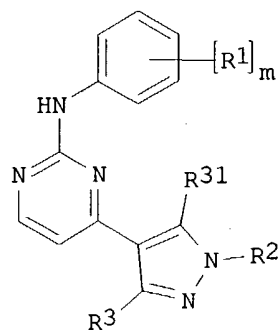
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---------------|--|----------|-----------------|----------|
| WO 2004005282 | A1 | 20040115 | WO 2003-EP7350 | 20030708 |
| W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LT, LU, LV, MA, MD, MK, MN, MX, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SE, SG, SK, SY, TJ, TM, TN, TR, TT, UA, US, UZ, VC, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | |
| RW: | AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR | | | |

PRIORITY APPLN. INFO.: GB 2002-15844 A 20020709

OTHER SOURCE(S): MARPAT 140:111424

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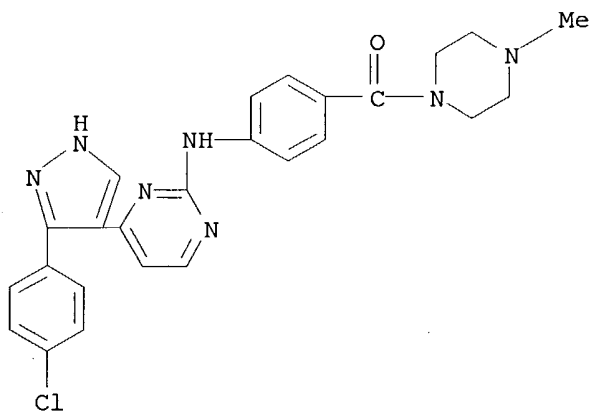
AB The title compds. [I; m = 1-5; R1 = alkylsulfonyl, (un)substituted aminosulfonyl, amino, etc.; R2 = H, (un)substituted alkyl, heterocyclyl; R3 = H, (un)substituted Ph; R31 = H if R3 = (un)substituted Ph or R31 = (un)substituted Ph if R3 = H; with the proviso], useful for treating diseases which respond to an inhibition of a protein tyrosine kinase, were prepared and formulated. Thus, reacting 2-chloro-4-[3-(4-chlorophenyl)-1H-pyrazol-4-yl]pyrimidine with 4-(4-methylpiperazin-1-yl)phenylamine afforded I [R1 = 4-(4-methylpiperazin-1-yl); m = 1; R2 = H; R3 = 4-ClC6H4; R31 = H] which showed IC50 of 0.018 μ M, 0.023 μ M, and 0.01 μ M against EGF-R (HER-1), ErbB-2 (HER-2) and VEGF receptor (KDR), resp. The invention relates also to pharmaceutical compns. comprising the compds. I and to the use of such derivs. - alone or in combination with one or more other pharmaceutically active compds. - for the preparation of pharmaceutical compns. for the treatment especially of a proliferative disease, such as a tumor.

IT **646525-64-6P 646526-58-1P**

RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(preparation of phenyl[4-(3-phenyl-1H-pyrazol-4-yl)pyrimidin-2-yl]amines as protein tyrosine kinase inhibitors)

RN 646525-64-6 CAPLUS

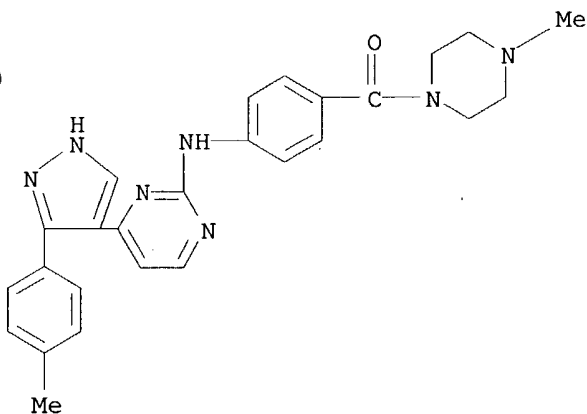
CN Piperazine, 1-[4-[[4-[3-(4-chlorophenyl)-1H-pyrazol-4-yl]-2-pyrimidinyl]amino]benzoyl]-4-methyl- (9CI) (CA INDEX NAME)



RN 646526-58-1 CAPLUS

CN Piperazine, 1-methyl-4-[4-[[4-[3-(4-methylphenyl)-1H-pyrazol-4-yl]-2-

pyrimidinyl]amino]benzoyl]- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 4 OF 18 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2003:1001978 CAPLUS

DOCUMENT NUMBER: 140:314405

TITLE: A novel series of potent and selective IKK2 inhibitors
AUTHOR(S): Bingham, Alistair H.; Davenport, Richard J.; Gowers, Lewis; Knight, Roland L.; Lowe, Christopher; Owen, David A.; Parry, David M.; Pitt, Will R.

CORPORATE SOURCE: Celltech R&D Ltd, Great Abington, Cambridge, CB16GS, UK

SOURCE: Bioorganic & Medicinal Chemistry Letters (2004), 14(2), 409-412

CODEN: BMCLE8; ISSN: 0960-894X

PUBLISHER: Elsevier Science B.V.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A novel series of aminopyrimidine IKK2 inhibitors have been developed which show excellent in vitro inhibition of this enzyme and good selectivity over the IKK1 isoform. The relative potency and selectivity of these compds. has been rationalized using QSAR and structure-based modeling.

IT 677753-21-8P

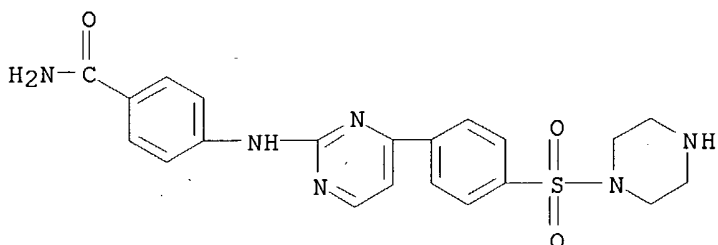
RL: DMA (Drug mechanism of action); PAC (Pharmacological activity); PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation and QSAR studies of series of potent and selective aminopyrimidine IKK2 inhibitors)

RN 677753-21-8 CAPLUS

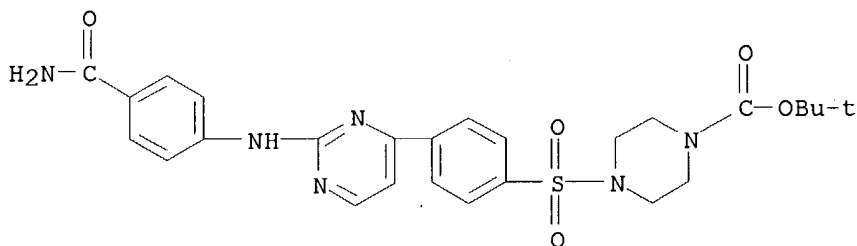
CN Benzamide, 4-[[4-[4-(1-piperazinylsulfonyl)phenyl]-2-pyrimidinyl]amino]- (9CI) (CA INDEX NAME)

Date not good

10/004,642



IT **677753-00-3P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and QSAR studies of series of potent and selective aminopyrimidine IKK2 inhibitors)
RN 677753-00-3 CAPLUS
CN 1-Piperazinecarboxylic acid, 4-[[4-[2-[[4-(aminocarbonyl)phenyl]amino]-4-pyrimidinyl]phenyl]sulfonyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

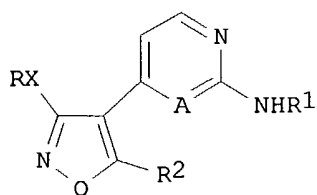


REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

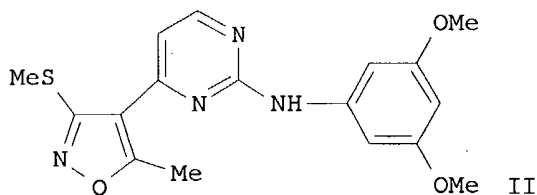
L6 ANSWER 5 OF 18 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2003:874966 CAPLUS
DOCUMENT NUMBER: 139:364918
TITLE: Preparation of isoxazole derivatives as inhibitors of Src and other protein kinases
INVENTOR(S): Harrington, Edmund
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 22 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|--------|------------|-----------------|----------|
| US 2003207873 | A1 | 20031106 | US 2002-119890 | 20020410 |
| PRIORITY APPLN. INFO.: | | | US 2002-119890 | 20020410 |
| OTHER SOURCE(S): | MARPAT | 139:364918 | | |

GI



I



II

AB Isoxazole derivs. of formula I [X = alkylene, O, S, (substituted) NH, SO₂, etc.; A = N, (substituted) CH; R = H, alkyl, aryl, etc.; R₁ = H, alkyl, aryl, acyl, etc.; R₂ = H, alkyl, CH₂OH, CHO, CH₂NH₂, aryl, etc.] are prepared. These compds. are inhibitors of protein kinase, particularly inhibitors of Src mammalian protein kinase involved in cell proliferation, cell death and response to extracellular stimuli. Thus, II was prepared from 3-(bis(methylthio)methylene)pentane-2,4-dione, DMF di-Me acetal and 3,5-dimethoxyphenyl guanidine. Many of the compds. tested for inhibition of Src had IC₅₀ < 1 μM.

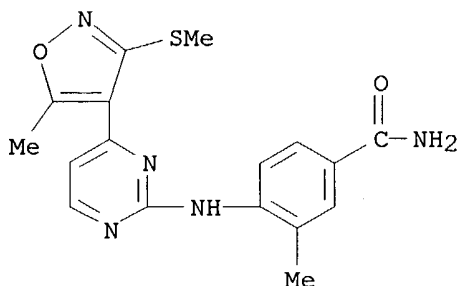
IT **473445-59-9P**

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of isoxazole derivs. as inhibitors of Src, Lck, and JNK3 protein kinases)

RN 473445-59-9 CAPLUS

CN Benzamide, 3-methyl-4-[[4-[5-methyl-3-(methylthio)-4-isoxazolyl]-2-pyrimidinyl]amino]- (9CI) (CA INDEX NAME)



L6 ANSWER 6 OF 18 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2003:590836 CAPLUS

DOCUMENT NUMBER: 139:149624

TITLE: Preparation of 1,4-diarylpyrazole inhibitors of src and other protein kinases

INVENTOR(S): Young, Choon Moon

PATENT ASSIGNEE(S): USA

SOURCE: U.S. Pat. Appl. Publ., 35 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---------------|------|----------|-----------------|----------|
| US 2003144309 | A1 | 20030731 | US 2002-146984 | 20020516 |

PRIORITY APPLN. INFO.:

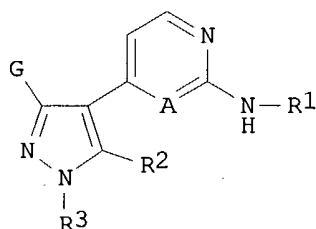
US 2002-146984

20020516

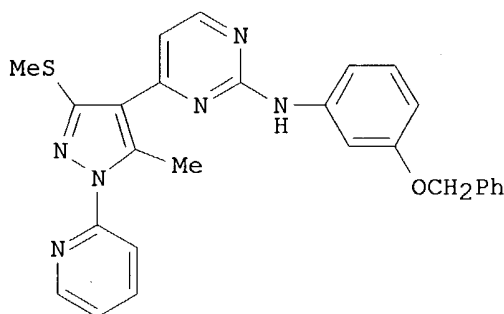
OTHER SOURCE(S):

MARPAT 139:149624

GI



I



II

AB Title compds. I [G = XR, XAr; X = alkylidene wherein one or two non-adjacent methylene units of X are replaced by O, amino, S, CO, etc.; A = N, CR; R = H, aliphatic, etc.; Ar = (un)substituted 5-6 membered (un)saturated

monocyclic ring, etc.; R1 = TnR, TnAr; n = 0-1; T = CO, CO2, COCO, etc.; R2 = H, Ar, aliphatic; R3 = R, Ar] are prepared For instance, 3-(bis(methylsulfanyl)methylene)pentane-2,4-dione (preparation given) is condensed with (pyridin-2-yl)hydrazine to give 1-[5-methyl-3-(methylsulfanyl)-1-(pyridin-2-yl)-1H-pyrazole-4-yl]ethanone. This intermediate is reacted with DMFDMA (reflux) and the resulting β -amino enone condensed with N-(3-benzyloxyphenyl)guanidine to give II. Many of the compds. have $K_i \leq 1 \mu\text{M}$ for src kinase. I are inhibitors of protein kinase, particularly inhibitors of src mammalian protein kinase involved in cell proliferation, cell death in response to extracellular stimuli.

IT **475573-47-8P 475573-59-2P**

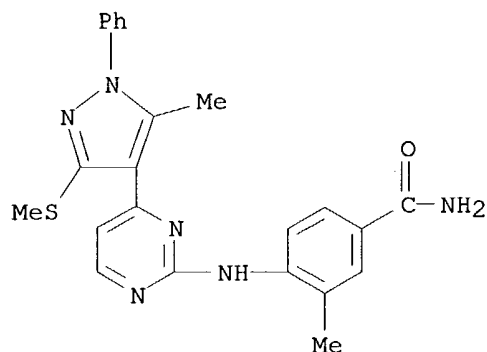
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of 1-phenyl-4-pyrimidinyl-substituted pyrazole inhibitors of src and other protein kinases)

RN 475573-47-8 CAPLUS

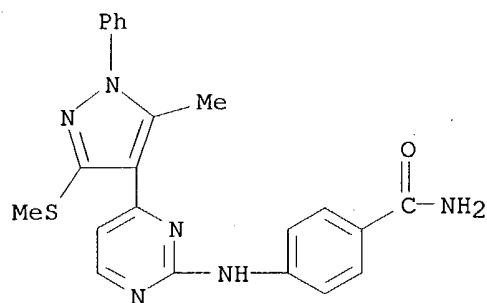
CN Benzamide, 3-methyl-4-[[4-[5-methyl-3-(methylthio)-1-phenyl-1H-pyrazol-4-yl]-2-pyrimidinyl]amino]- (9CI) (CA INDEX NAME)

10/004,642



RN 475573-59-2 CAPLUS

CN Benzamide, 4-[[4-[5-methyl-3-(methylthio)-1-phenyl-1H-pyrazol-4-yl]-2-pyrimidinyl]amino]- (9CI) (CA INDEX NAME)



L6 ANSWER 7 OF 18 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2003:491232 CAPLUS

DOCUMENT NUMBER: 139:69273

TITLE: Preparation of (pyrazolo[1,5-b]pyridazinyl)pyrimidinamines and analogs as cyclin dependent kinase inhibitors for treatment of cancer

INVENTOR(S): Harris, Phillip Anthony; Jung, David Kendall; Peel, Michael Robert; Reno, Michael John; Rheault, Tara Renae; Stanford, Jennifer Badiang; Stevens, Kirk Lawrence; Veal, James Marvin

PATENT ASSIGNEE(S): Smithkline Beecham Corporation, USA

SOURCE: PCT Int. Appl., 134 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---------------|---|----------|-----------------|----------|
| WO 2003051886 | A1 | 20030626 | WO 2002-US39672 | 20021211 |
| W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, | | | |

RU, TJ, TM
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG,
 CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,
 PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,
 MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.:

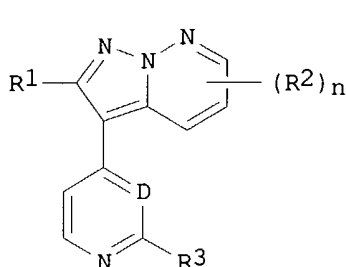
US 2001-341798P

P 20011217

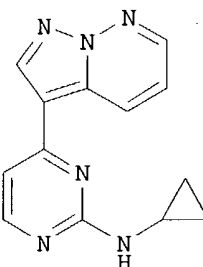
OTHER SOURCE(S):

MARPAT 139:69273

GI



I



II

AB Fused pyridazine derivs. I [wherein D = N or CH; R1 = H, alkyl, alkenyl, alkynyl, alkoxy, halo, CF3, OH, CN, SO0-2-alkyl, or NR4R5; R2 = H, (cyclo)alkyl, alkenyl, alkynyl, haloalkyl, halo, heterocyclyl, (hetero)aryl, CN, N3, NO2, OR8, OR6R8, R6R7, R6R11, OSO2R9, SO0-2R10, COR7, CO2R7, CONR4R5, NHR12C(NR4)NR4R5, OCONR4R5, OCO2R7, C(NR4)NR4R5, NR4R5, OCOR7, or NR8COR8; R3 = QpQ1; R4 and R5 = independently H, (cyclo)alkyl, or COR9; or NR4R5 = heterocyclyl; R6 = (cyclo)alkylene, (cyclo)alkenylene, alkynylene, or (hetero)arylene; R7 = H, (cyclo)alkyl, alkenyl, alkynyl, NR4R5, (hetero)aryl, aralkyl, heterocyclyl, SO0-2R10, COR8, CO2R8, CONR4R5, NHR12C(NR4)NR4R5, OCONR4R5, OCO2R8, C(NR4)NR4R5, NR4R5, OCOR7, or NR8COR8; R8 = H, (cyclo)alkyl, alkenyl, alkynyl, NR4R5, (hetero)aryl, aralkyl, heterocyclyl, or SO2R9; R9 = (halo)alkyl; R10 = H, (cyclo)alkyl, alkenyl, alkynyl, NR4R5, (hetero)aryl, aralkyl, heterocyclyl, COR8, CO2R8, CONR4R5, NHR12C(NR4)NR4R5, OCONR4R5, OCO2R8, C(NR4)NR4R5, NR4R5, or NR8COR8; R11 = OR7, OCONR4R5, OCO2R7, or OCOR7; R12 = alkylene; Q = O, NR8, or SO0-2; Q1 = (cyclo)alkyl, haloalkyl, (un)substituted aryl, heteroaryl, aralkyl, or R6NR4R5; n = 1-2; p = 0-1; and salts solvates, and physiol. functional derivs. thereof] were prepared as cyclin dependent kinase (CDK) inhibitors. For example, reaction of 1-aminopyridazinium iodide with 3-butyne-2-one in the presence of KOH in H2O provided 1-(pyrazolo[1,5-b]pyridazin-3-yl)ethanone (69%). Coupling of the ethanone with DMF di-tert-Bu acetal afforded (2E)-3-(dimethylamino)-1-pyrazolo[1,5-b]pyridazin-3-yl-2-propen-1-one (70%), which was cyclized with N-cyclopropylguanidine•0.5H2SO4 in DMF to give II (75%). The latter inhibited CDK4 and CDK2 with IC50 values of <0.1 μM and <1.0 μM, resp. Thus, I are useful for the treatment of hyperproliferative diseases, such as cancer (no data).

IT **551920-05-9P**, N-[2-(Diethylamino)ethyl]-4-[[4-(pyrazolo[1,5-b]pyridazin-3-yl)-2-pyrimidinyl]amino]benzamide

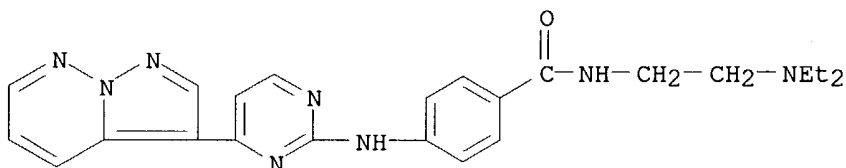
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(CDK inhibitor; preparation of (pyrazolo[1,5-b]pyridazinyl)pyrimidinamines and analogs as CDC inhibitors for treatment of cancer)

RN 551920-05-9 CAPLUS

10/004,642

CN Benzamide, N-[2-(diethylamino)ethyl]-4-[(4-pyrazolo[1,5-b]pyridazin-3-yl-2-pyrimidinyl)amino]- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 8 OF 18 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2003:117807 CAPLUS

DOCUMENT NUMBER: 138:153548

TITLE: Preparation of 4-(pyrazolyl)-2-pyrimidinamines as tyrosine kinase inhibitors

INVENTOR(S): Fraley, Mark E.; Peckham, Jennifer P.; Arrington, Kenneth L.; Hoffman, William F.; Hartman, George D.

PATENT ASSIGNEE(S): Merck & Co., Inc., USA

SOURCE: PCT Int. Appl., 96 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

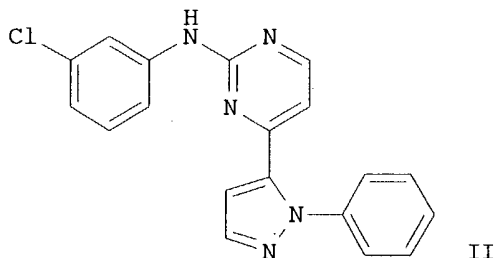
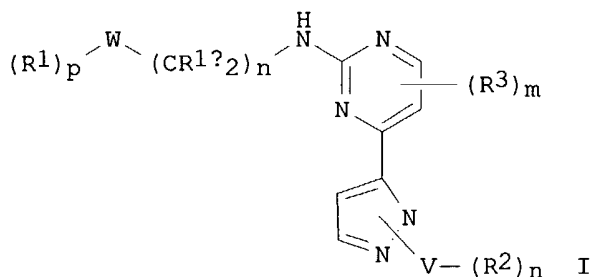
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---------------|--|----------|-----------------|----------|
| WO 2003011837 | A1 | 20030213 | WO 2002-US23879 | 20020726 |
| W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | |
| RW: | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | |

PRIORITY APPLN. INFO.: US 2001-309399P P 20010801

OTHER SOURCE(S): MARPAT 138:153548

GI

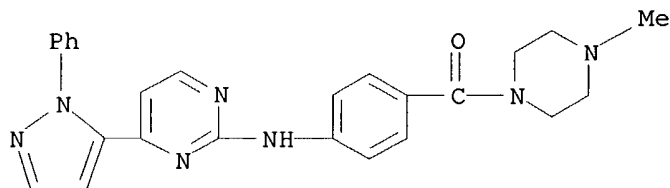


- AB The present invention relates to title compds. I [wherein R1a = H, (un)substituted alkyl, OR8, or N(R8)2; R1 and R2 = independently H, halo, CF3, (CH2)tR9COR8, COR9, (CH2)tOR8, CN, (CH2)tNR7R8, (CH2)tCONR7R8, CO2R8, (CH2)tSOO-2(CH2)tNR7R8, or (un)substituted (cyclo)alkyl, aryl, heterocyclyl, alkenyl, or alkynyl; R3 = independently H, CN, halo, N(R3)2, (CH2)tOR8, or (un)substituted (ar)alkyl or aryl; R7 = independently H or (un)substituted (ar)alkyl; R8 = independently H or (un)substituted (cyclo)alkyl, aryl, heterocyclyl, or aralkyl; or NR7R8 = (un)substituted heterocyclyl; R9 = independently (un)substituted heterocyclyl, alkyl, or aryl; V = a bond, aryl, or heterocyclyl; W = aryl or heterocyclyl; m = 0-2; n = 0-6; p = 0-4; t = independently 0-6; and pharmaceutically acceptable salts, hydrates, and stereoisomers thereof], which inhibit, regulate and/or modulate tyrosine kinase signal transduction, compns. which contain these compds., and methods of using them to treat tyrosine kinase-dependent diseases and conditions. For example, 2-(methylthio)pyrimidine-4-carboxylic acid was amidated with dimethylhydroxylamine•HCl in the presence of EDC and TEA, and the product treated with MeMgBr in Et2O to give 1-[2-(methylthio)pyrimidin-4-yl]ethanone. Coupling with N,N-dimethylformamide dimethylacetal followed by cyclization with phenylhydrazine afforded 2-(methylthio)-4-(1-phenyl-1H-pyrazol-3/5-yl)pyrimidine. Oxidation with oxone and reaction with 3-chloroaniline provided the 4-(pyrazolyl)-2-pyrimidinamine II. In bioassays, I inhibited VEGF-stimulated mitogenesis of human vascular endothelial cells in culture with IC50 values between 0.01 μM and 5.0 μM. Thus, I are useful for the treatment of angiogenesis, cancer, tumor growth, atherosclerosis, age related macular degeneration, diabetic retinopathy, inflammatory diseases, and the like in mammals (no data).
- IT **496863-56-0P**, N-[4-[(4-Methylpiperazin-1-yl)carbonyl]phenyl]-4-(1-phenyl-1H-pyrazol-5-yl)pyrimidin-2-amine **496863-57-1P**, N-[4-[(4-Methylpiperazin-1-yl)carbonyl]phenyl]-4-(1-phenyl-1H-pyrazol-5-yl)pyrimidin-2-amine trifluoroacetate
 RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (tyrosine kinase inhibitor; preparation of (pyrazolyl)pyrimidinamine tyrosine kinase inhibitors by reacting amines with (methylsulfonyl) (pyrazolyl)pyrimidines)

10/004,642

RN 496863-56-0 CAPLUS

CN Piperazine, 1-methyl-4-[4-[[4-(1-phenyl-1H-pyrazol-5-yl)-2-pyrimidinyl]amino]benzoyl]- (9CI) (CA INDEX NAME)



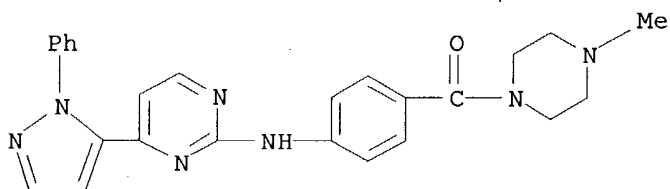
RN 496863-57-1 CAPLUS

CN Piperazine, 1-methyl-4-[4-[[4-(1-phenyl-1H-pyrazol-5-yl)-2-pyrimidinyl]amino]benzoyl]-, trifluoroacetate (9CI) (CA INDEX NAME)

CM 1

CRN 496863-56-0

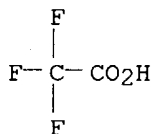
CMF C25 H25 N7 O



CM 2

CRN 76-05-1

CMF C2 H F3 O2



REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 9 OF 18 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2002:888716 CAPLUS

DOCUMENT NUMBER: 137:384853

TITLE: Preparation of pyrazolyl pyrimidinamines and pyrimidinamines as inhibitors of Src and other protein kinases

INVENTOR(S): Moon, Young-Choon

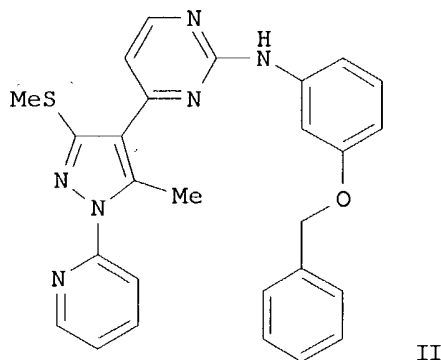
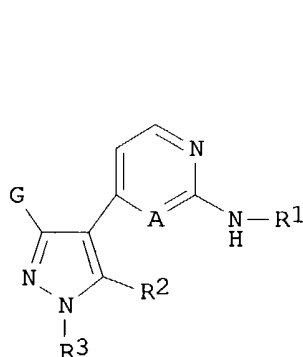
PATENT ASSIGNEE(S): Vertex Pharmaceuticals Incorporated, USA

SOURCE: PCT Int. Appl., 75 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 3
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|-------------------|-----------------|------------|
| WO 2002092573 | A2 | 20021121 | WO 2002-US15606 | 20020516 |
| WO 2002092573 | A3 | 20040122 | | |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| EP 1404669 | A2 | 20040407 | EP 2002-769762 | 20020516 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR | | | | |
| PRIORITY APPLN. INFO.: | | | US 2001-291340P | P 20010516 |
| | | | WO 2002-US15606 | W 20020516 |
| OTHER SOURCE(S): | | MARPAT 137:384853 | | |
| GI | | | | |



AB Title compds. I [wherein G = XR or XAr; X = independently alkylidene wherein 1-2 non-adjacent methylene units are independently replaced by O, NR, S, CO, CONR, NRCONR, SO, SO2, NRSO2, SO2NR, or NRSO2NR; A = N or CR; R = H or (un)substituted aliphatic group; or NR2 = heterocyclyl; Ar = (un)substituted 5-6 membered monocyclic ring with 0-3 heteroatoms or 8-10 membered bicyclic ring with 0-4 heteroatoms; R1 = TnR or TnAr; n = 0-1; T = CO, CO2, COCO, COCH2CO, CONR, SO2, or SO2NR; R2 = H, Ar, or (un)substituted aliphatic group; R3 = R or Ar; or pharmaceutically acceptable derivs. thereof] were prepared as inhibitors of protein kinase, particularly inhibitors of Src mammalian protein kinase involved in cell proliferation, cell death and response to extracellular stimuli (no data). For example, 3-dimethylamino-1-[5-methyl-3-methylsulfanyl-1-(pyridin-2-yl)-1H-pyrazol-4-yl]propanone was coupled with N-(3-benzyloxyphenyl)guanidine in MeOH to give II (40%). I and compns. containing I are useful in the treatment and

prevention of various inflammatory, autoimmune, destructive bone, proliferative, infectious, neurodegenerative, allergic, and cardiac disorders and diseases (no data).

IT **475573-47-8P**, N-(2-Methyl-4-(aminocarbonyl)phenyl)-N-[4-[5-methyl-3-(methylthio)-1-phenyl-1H-pyrazol-4-yl]pyrimidin-2-yl]amine

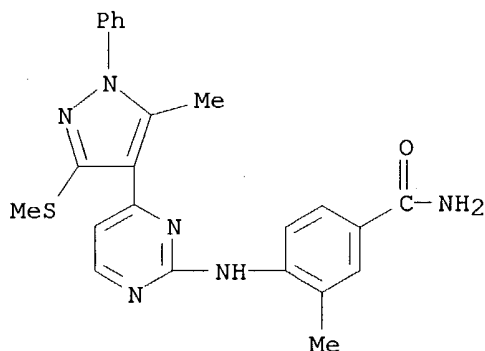
475573-59-2P, N-(4-(Aminocarbonyl)phenyl)-N-[4-[5-methyl-3-(methylthio)-1-phenyl-1H-pyrazol-4-yl]pyrimidin-2-yl]amine

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(Src protein kinase inhibitor; preparation of pyrazolyl pyridinamines and pyrimidinamine inhibitors of protein kinases using condensation, cyclization, and substitution reactions)

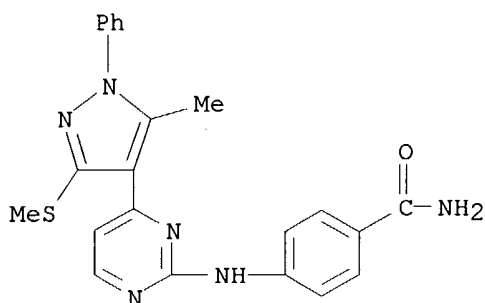
RN 475573-47-8 CAPLUS

CN Benzamide, 3-methyl-4-[[4-[5-methyl-3-(methylthio)-1-phenyl-1H-pyrazol-4-yl]-2-pyrimidinyl]amino]- (9CI) (CA INDEX NAME)



RN 475573-59-2 CAPLUS

CN Benzamide, 4-[[4-[5-methyl-3-(methylthio)-1-phenyl-1H-pyrazol-4-yl]-2-pyrimidinyl]amino]- (9CI) (CA INDEX NAME)



L6 ANSWER 10 OF 18 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2002:814127 CAPLUS

DOCUMENT NUMBER: 137:325409

TITLE: Preparation of isoxazole derivatives as inhibitors of Src and other protein kinases

INVENTOR(S): Harrington, Edmund

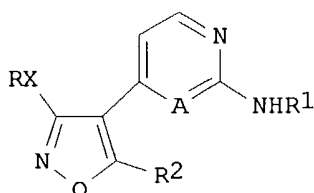
PATENT ASSIGNEE(S): Vertex Pharmaceuticals Incorporated, USA

SOURCE: PCT Int. Appl., 63 pp.

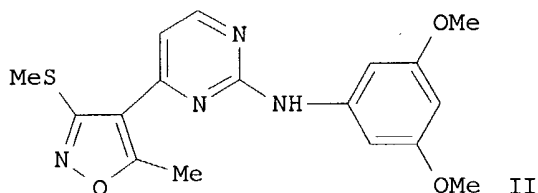
CODEN: PIXXD2

DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|----------|
| WO 2002083668 | A1 | 20021024 | WO 2002-US11609 | 20020410 |
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I



II

AB Isoxazole derivs. of formula I [X = alkylene, O, S, (substituted) NH, SO₂, etc.; A = N, (substituted) CH; R = H, alkyl, aryl, etc.; R₁ = H, alkyl, aryl, acyl, etc.; R₂ = H, alkyl, CH₂OH, CHO, CH₂NH₂, aryl, etc.] are prepared. These compds. are inhibitors of protein kinase, particularly inhibitors of Src mammalian protein kinase involved in cell proliferation, cell death and response to extracellular stimuli. Thus, II was prepared from 3-(bis(methylthio)methylene)pentane-2,4-dione, DMF di-Me acetal and 3,5-dimethoxyphenyl guanidine. Many of the compds. tested for inhibition of Src had IC₅₀ < 1 μM.

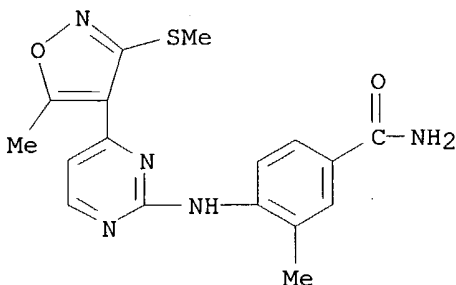
IT **473445-59-9P**

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of isoxazole derivs. as inhibitors of Src, Lck, and JNK3 protein kinases)

RN 473445-59-9 CAPLUS

CN Benzamide, 3-methyl-4-[[4-[5-methyl-3-(methylthio)-4-isoxazolyl]-2-pyrimidinyl]amino]- (9CI) (CA INDEX NAME)

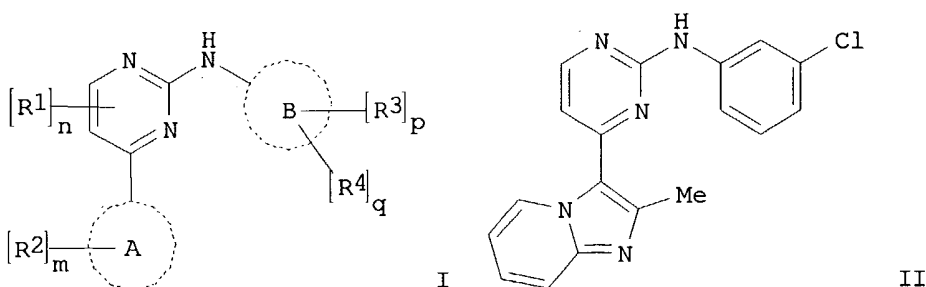


REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 11 OF 18 CAPLUS COPYRIGHT 2004 ACS on STN
 ACCESSION NUMBER: 2002:658126 CAPLUS
 DOCUMENT NUMBER: 137:201324
 TITLE: Preparation of 4-(imidazo[1,2-a]pyrid-3-yl)pyrazolo[2,3-a]pyrid-3-yl)-2-arylamino pyrimidines for the treatment of GSK3-related disorders
 INVENTOR(S): Berg, Stefan; Bhat, Ratan; Hellberg, Sven
 PATENT ASSIGNEE(S): Astrazeneca AB, Swed.
 SOURCE: PCT Int. Appl., 71 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|------------|
| WO 2002066480 | A2 | 20020829 | WO 2002-SE270 | 20020218 |
| WO 2002066480 | A3 | 20040401 | | |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| BR 2002007096 | A | 20040120 | BR 2002-7096 | 20020218 |
| EP 1423388 | A2 | 20040602 | EP 2002-712572 | 20020218 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR | | | | |
| JP 2004522777 | T2 | 20040729 | JP 2002-565994 | 20020218 |
| NO 2003003677 | A | 20031002 | NO 2003-3677 | 20030819 |
| US 2004106574 | A1 | 20040603 | US 2003-468605 | 20030819 |
| PRIORITY APPLN. INFO.: | | | US 2001-269903P | P 20010220 |
| | | | WO 2002-SE270 | W 20020218 |

OTHER SOURCE(S): MARPAT 137:201324
 GI



AB The title compds. [I; ring A = imidazo[1,2-a]pyrid-3-yl or pyrazolo[2,3-a]pyrid-3-yl; R2 = halo, NO2, CN, etc.; m = 0-5; R1 = halo, NO2, CN, etc.; n = 0-2; ring B = Ph, Ph fused to cycloalkyl; R3 = halo, NO2, CN, etc.; p = 0-4; R4 = EA (A = H, alkyl, Ph, etc.; E = a direct bond, O, CO, etc.); q = 0-2], useful in the treatment and/or prophylaxis of conditions associated with glycogen synthase kinase-3, were prepared and formulated. Thus, reacting 3-chloroaniline with 4-(2-methylimidazo[1,2-a]pyrid-3-yl)-2-methylthiopyrimidine (preparation given) in the presence of NaH in NMP afforded 21% II. Typical Ki values for the compds. I are in the range of about 0.001 to about 10,100 nM in human GSK3 β assay.

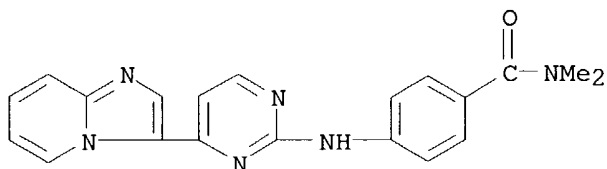
IT **328061-72-9P 328061-73-0P 328062-00-6P**
328062-01-7P 453510-77-5P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of 4-(imidazo[1,2-a]pyrid-3-yl/pyrazolo[2,3-a]pyrid-3-yl)-2-arylamino pyrimidines for the treatment of GSK3-related disorders)

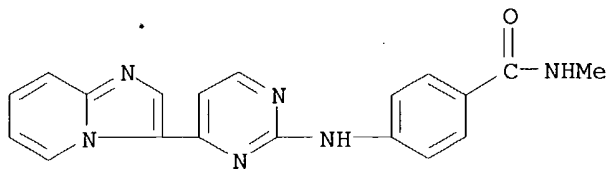
RN 328061-72-9 CAPLUS

CN Benzamide, 4-[(4-imidazo[1,2-a]pyridin-3-yl-2-pyrimidinyl)amino]-N,N-dimethyl- (9CI) (CA INDEX NAME)



RN 328061-73-0 CAPLUS

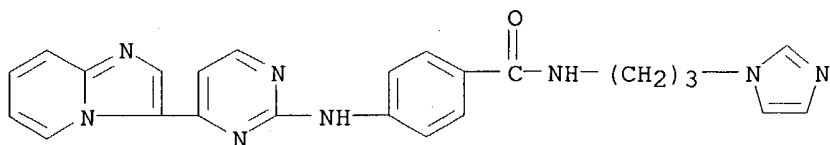
CN Benzamide, 4-[(4-imidazo[1,2-a]pyridin-3-yl-2-pyrimidinyl)amino]-N-methyl- (9CI) (CA INDEX NAME)



RN 328062-00-6 CAPLUS

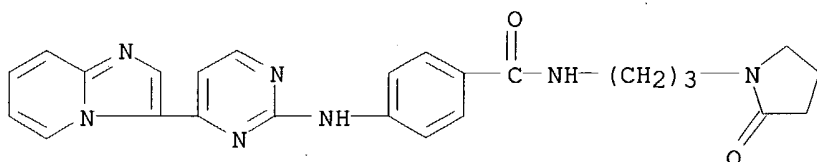
CN Benzamide, 4-[(4-imidazo[1,2-a]pyridin-3-yl-2-pyrimidinyl)amino]-N-[3-(1H-imidazol-1-yl)propyl]- (9CI) (CA INDEX NAME)

10/004,642



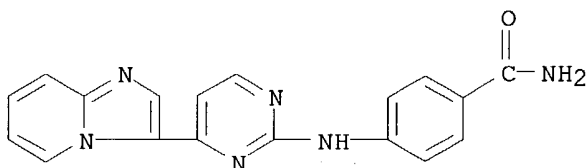
RN 328062-01-7 CAPLUS

CN Benzamide, 4-[(4-imidazo[1,2-a]pyridin-3-yl-2-pyrimidinyl)amino]-N-[3-(2-oxo-1-pyrrolidinyl)propyl]- (9CI) (CA INDEX NAME)



RN 453510-77-5 CAPLUS

CN Benzamide, 4-[(4-imidazo[1,2-a]pyridin-3-yl-2-pyrimidinyl)amino]- (9CI)
(CA INDEX NAME)



L6 ANSWER 12 OF 18 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2002:449662 CAPLUS

DOCUMENT NUMBER: 137:33310

TITLE: Preparation of anilinopyrimidines as IKK inhibitors

INVENTOR(S): Kois, Adam; MacFarlane, Karen J.; Satoh, Yoshitaka;
Bhagwat, Shripad S.; Parnes, Jason S.; Palanki,
Moorthy S. S.; Erdman, Paul E.

PATENT ASSIGNEE(S): Signal Pharmaceuticals, Inc., USA

SOURCE: PCT Int. Appl., 194 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

present casp

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---------------|------|----------|-----------------|----------|
| WO 2002046171 | A2 | 20020613 | WO 2001-US46403 | 20011205 |
| WO 2002046171 | A3 | 20030123 | | |

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CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,
PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA,
UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH,
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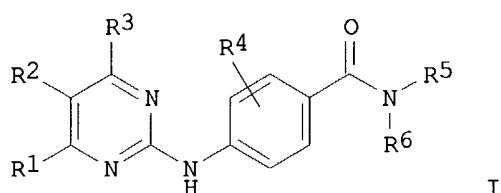
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| US 2003203926 | A1 | 20031030 | US 2001-4642 | 20011204 |
| AU 2002020195 | A5 | 20020618 | AU 2002-20195 | 20011205 |
| EP 1349841 | A2 | 20031008 | EP 2001-999564 | 20011205 |

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
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| JP 2004523497 | T2 | 20040805 | JP 2002-547910 | 20011205 |
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PRIORITY APPLN. INFO.: US 2000-251816P P 20001206
 WO 2001-US46403 W 20011205

OTHER SOURCE(S): MARPAT 137:33310
 GI

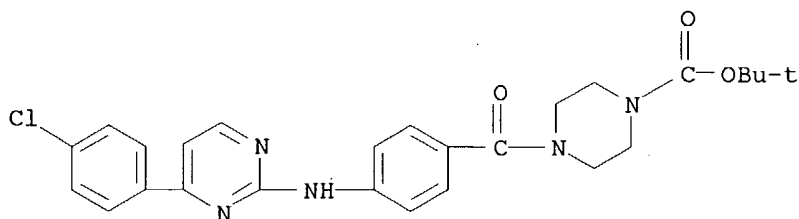


AB The title compds. [I; R1 = (un)substituted (hetero)aryl; R2 = H; R3 = H, alkyl; R4 = halo, OH, alkyl, alkoxy; R5, R6 = R8, (CH2)aCOR9, (CH2)aCO2R9, etc.; or NR5R6 = (un)substituted heterocycle; R8, R9 = H, alkyl, aryl, etc.; a = 0-4] having activity as inhibitors of IKK, particularly IKK-2, were prepared. E.g., a multi-step synthesis of I [R1 = 4-ClC6H4; R2-R6 = H] having an IC50 of $\leq 1 \mu\text{M}$ in the IKK-2 enzyme assay, was given. Such compds. I have utility in the treatment of a wide range of conditions that are responsive to IKK inhibition. Thus, methods of treating such conditions are also disclosed, as are pharmaceutical compns. containing one or more compds. of the above compds.

IT **434945-83-2P 434947-59-8P 434947-63-4P**
 RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
 (preparation of anilinopyrimidines as IKK inhibitors)

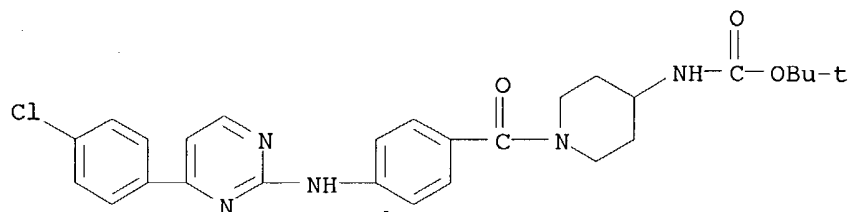
RN 434945-83-2 CAPLUS

CN 1-Piperazinecarboxylic acid, 4-[4-[[4-(4-chlorophenyl)-2-pyrimidinyl]amino]benzoyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

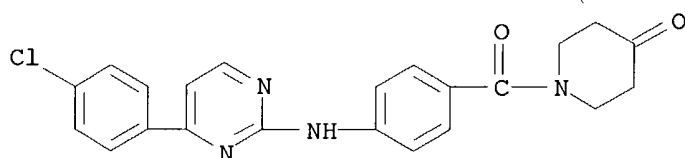


RN 434947-59-8 CAPLUS

CN Carbamic acid, [1-[4-[[4-(4-chlorophenyl)-2-pyrimidinyl]amino]benzoyl]-4-piperidinyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



RN 434947-63-4 CAPLUS

CN 4-Piperidinone, 1-[4-[[4-(4-chlorophenyl)-2-pyrimidinyl]amino]benzoyl]-
(9CI) (CA INDEX NAME)

IT 434944-82-8P 434944-84-0P 434944-85-1P
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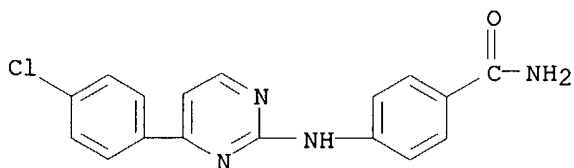
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434947-33-8P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU
(Therapeutic use); BIOL (Biological study); PREP (Preparation); USES
(Uses)

(preparation of anilinopyrimidines as IKK inhibitors)

RN 434944-82-8 CAPLUS

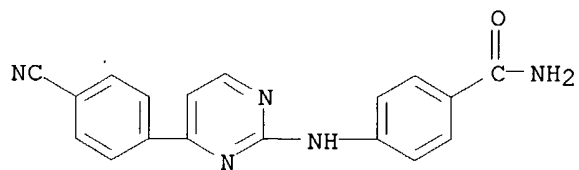
CN Benzamide, 4-[[4-(4-chlorophenyl)-2-pyrimidinyl]amino]- (9CI) (CA INDEX
NAME)



10/004,642

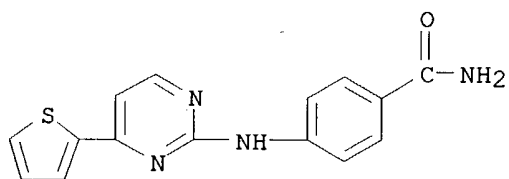
RN 434944-84-0 CAPLUS

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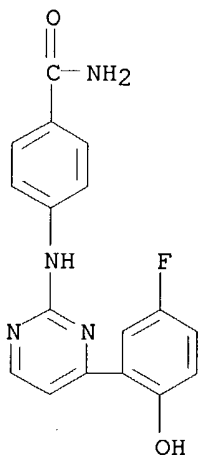
RN 434944-85-1 CAPLUS

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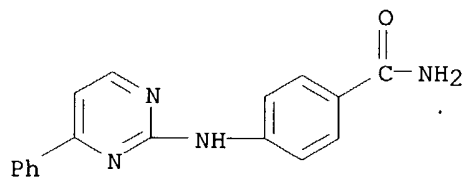
RN 434944-86-2 CAPLUS

CN Benzamide, 4-[[4-(5-fluoro-2-hydroxyphenyl)-2-pyrimidinyl]amino]- (9CI) (CA INDEX NAME)

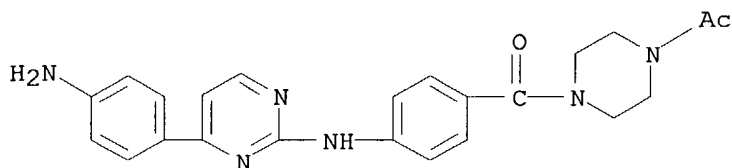


RN 434944-87-3 CAPLUS

CN Benzamide, 4-[(4-phenyl-2-pyrimidinyl)amino]- (9CI) (CA INDEX NAME)



10/004,642



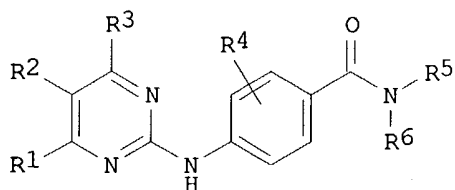
L6 ANSWER 13 OF 18 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2002:449661 CAPLUS
DOCUMENT NUMBER: 137:33309
TITLE: Preparation of anilinopyrimidines as JNK pathway inhibitors
INVENTOR(S): Kois, Adam; MacFarlane, Karen J.; Satoh, Yoshitaka; Bhagwat, Shripad S.; Parnes, Jason S.; Palanki, Moorthy S. S.; Erdman, Paul E.
PATENT ASSIGNEE(S): Signal Pharmaceuticals, Inc., USA
SOURCE: PCT Int. Appl., 199 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|----------|
| WO 2002046170 | A2 | 20020613 | WO 2001-US46402 | 20011205 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| AU 2002027214 | A5 | 20020618 | AU 2002-27214 | 20011205 |
| EP 1349840 | A2 | 20031008 | EP 2001-996103 | 20011205 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR | | | | |

PRIORITY APPLN. INFO.:

US 2000-251904P P 20001206
WO 2001-US46402 W 20011205

OTHER SOURCE(S): MARPAT 137:33309
GI



I

AB The title compds. [I; R1 = (un)substituted (hetero)aryl; R2 = H; R3 = H, alkyl; R4 = halo, OH, alkyl, alkoxy; R5, R6 = R8, (CH2)acOR9, (CH2)acOR9, etc.; or NR5R6 = (un)substituted heterocycle; R8, R9 = H, alkyl, aryl,

present
+ 10/004,642

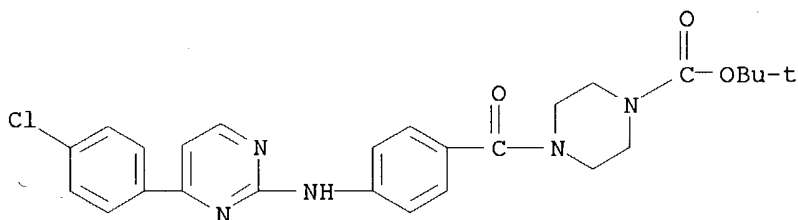
etc.; a = 0-4] having activity as inhibitors of the JNK pathway, were prepared E.g., a multi-step synthesis of I [R1 = 4-ClC6H4; R2-R6 = H] having an IC50 of $\leq 10 \mu\text{M}$ in the JNK2 assay, was given. Such compds. I have utility in the treatment of a wide range of conditions that are responsive to inhibition of the JNK pathway. Thus, methods of treating such conditions are also disclosed, as are pharmaceutical compns. containing one or more compds. of the above compds.

IT **434945-83-2P 434947-59-8P 434947-63-4P**

RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(preparation of anilinopyrimidines as JNK pathway inhibitors)

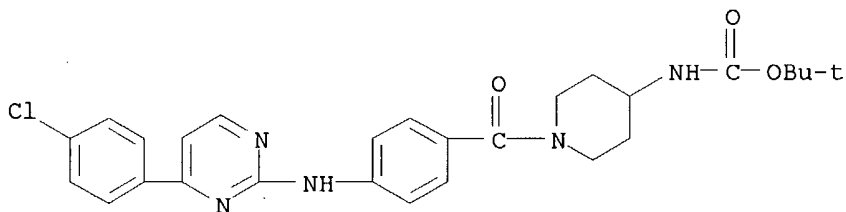
RN 434945-83-2 CAPLUS

CN 1-Piperazinecarboxylic acid, 4-[4-[[4-(4-chlorophenyl)-2-pyrimidinyl]amino]benzoyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



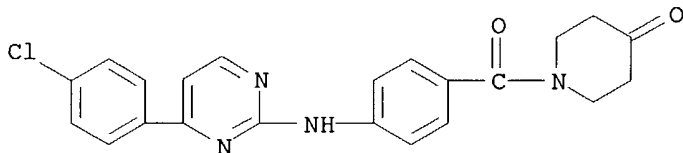
RN 434947-59-8 CAPLUS

CN Carbamic acid, [1-[4-[[4-(4-chlorophenyl)-2-pyrimidinyl]amino]benzoyl]-4-piperidinyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



RN 434947-63-4 CAPLUS

CN 4-Piperidinone, 1-[4-[[4-(4-chlorophenyl)-2-pyrimidinyl]amino]benzoyl]- (9CI) (CA INDEX NAME)



IT **434944-82-8P 434944-84-0P 434944-85-1P**
434944-86-2P 434944-87-3P 434944-88-4P
434944-89-5P 434944-90-8P 434944-91-9P
434944-92-0P 434944-93-1P 434944-94-2P

434944-95-3P 434944-96-4P 434944-97-5P
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434946-80-2P 434946-81-3P 434946-82-4P

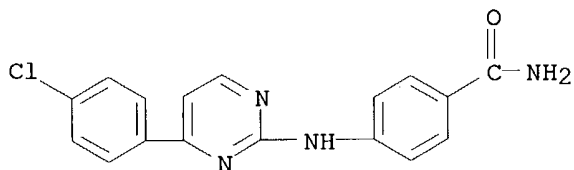
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 434947-33-8P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU
 (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES
 (Uses)

(preparation of anilinopyrimidines as JNK pathway inhibitors)

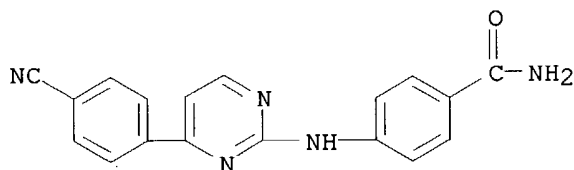
RN 434944-82-8 CAPLUS

CN Benzamide, 4-[[4-(4-chlorophenyl)-2-pyrimidinyl]amino]- (9CI) (CA INDEX
 NAME)



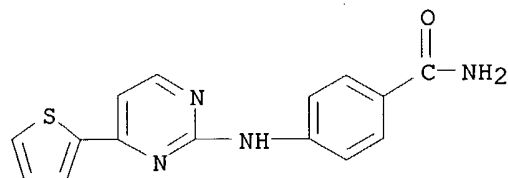
RN 434944-84-0 CAPLUS

CN Benzamide, 4-[[4-(4-cyanophenyl)-2-pyrimidinyl]amino]- (9CI) (CA INDEX
 NAME)



RN 434944-85-1 CAPLUS

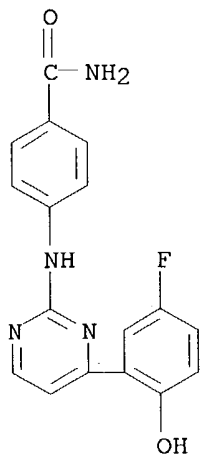
CN Benzamide, 4-[[4-(2-thienyl)-2-pyrimidinyl]amino]- (9CI) (CA INDEX NAME)



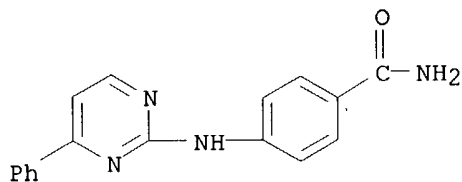
RN 434944-86-2 CAPLUS

CN Benzamide, 4-[[4-(5-fluoro-2-hydroxyphenyl)-2-pyrimidinyl]amino]- (9CI)
 (CA INDEX NAME)

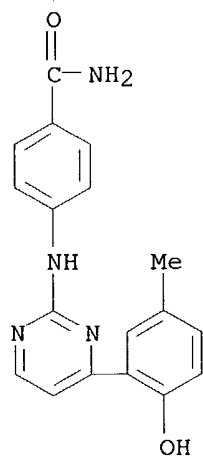
10/004,642



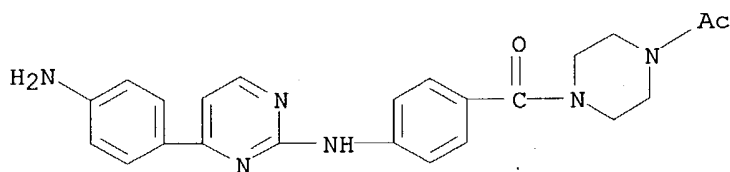
RN 434944-87-3 CAPLUS
CN Benzamide, 4-[(4-phenyl-2-pyrimidinyl)amino]- (9CI) (CA INDEX NAME)



RN 434944-88-4 CAPLUS
CN Benzamide, 4-[[4-(2-hydroxy-5-methylphenyl)-2-pyrimidinyl]amino]- (9CI)
(CA INDEX NAME)



RN 434944-89-5 CAPLUS
CN Benzamide, 4-[[4-(1H-pyrrol-2-yl)-2-pyrimidinyl]amino]- (9CI) (CA INDEX NAME)



L6 ANSWER 14 OF 18 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2002:185108 CAPLUS

DOCUMENT NUMBER: 136:247599

TITLE: Preparation of imidazolo-5-yl-2-anilino-pyrimidines as agents for the inhibition of the cell proliferation

INVENTOR(S): Breault, Gloria Anne; Newcombe, Nicholas John; Thomas, Andrew Peter

PATENT ASSIGNEE(S): Astrazeneca AB, Swed.; Astrazeneca UK Limited

SOURCE: PCT Int. Appl., 108 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

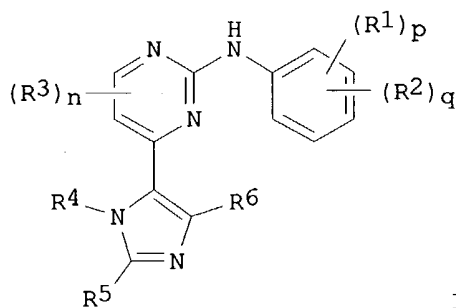
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

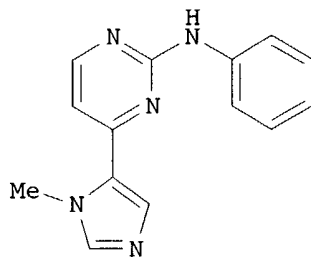
| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|------------|
| WO 2002020512 | A1 | 20020314 | WO 2001-GB3864 | 20010830 |
| WO 2002020512 | C2 | 20040506 | | |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| AU 2001084192 | A5 | 20020322 | AU 2001-84192 | 20010830 |
| BR 2001013496 | A | 20030701 | BR 2001-13496 | 20010830 |
| EP 1351958 | A1 | 20031015 | EP 2001-963159 | 20010830 |
| EP 1351958 | B1 | 20040616 | | |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR | | | | |
| JP 2004508365 | T2 | 20040318 | JP 2002-525133 | 20010830 |
| JP 3523641 | B2 | 20040426 | | |
| BG 107579 | A | 20031031 | BG 2003-107579 | 20030221 |
| NO 2003001006 | A | 20030304 | NO 2003-1006 | 20030304 |
| US 2004014776 | A1 | 20040122 | US 2003-363655 | 20030304 |
| PRIORITY APPLN. INFO.: | | | GB 2000-21726 | A 20000905 |
| | | | WO 2001-GB3864 | W 20010830 |

OTHER SOURCE(S): MARPAT 136:247599

GI



I



II

AB Title compds. I [R1 = halo, nitro, cyano, hydroxy, amino, carboxy, carbamoyl, mercapto, alk(en/yn)yl, alkoxy; p = 0-4; R2 = sulfamoyl, Ra-Rb; q = 0-2; p + q = 0-5; R3 = halo, nitro, cyano, hydroxy, trifluoromethyl, trifluoromethoxy, amino, carboxy, carbamoyl, mercapto, sulfamoyl, alk(en/yn)yl, alkoxy, alkanoyl, etc.; n = 0-2, R4 = H, alk(en/yn)yl, cycloalkyl, Ph, etc.; R5-6 = H, halo, nitro, cyano, hydroxy, trifluoromethoxy, amino, carboxy, carbamoyl, mercapto, sulfamoyl, alk(en/yn)yl, alkoxy, etc.; Ra = alk(en/yn)yl, cycloalkyl, Ph, heterocyclyl, phenyl-alkyl, etc.; Rb = C(O), amido, carboxamido, etc.] were prepared For instance, phenylguanidine hydrogen carbonate was condensed with 5-(3-dimethylaminoprop-2-en-1-oyl)-1-methylimidazole (i-PrOH, NaOMe, reflux, 3 h) to give II in 64% yield. The CDK2 inhibitory activity of II was measured as IC50 = 0.146 μ M.

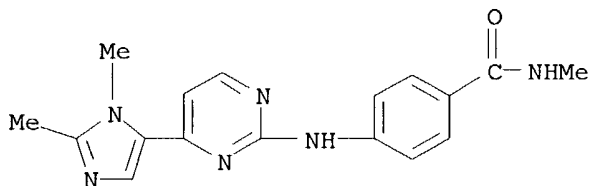
IT **403792-67-6P**, 4-[(1,2-Dimethylimidazol-5-yl)-2-(4-(N-methylcarbamoyl)anilino)pyrimidin-5-yl]-2-(4-(N-methylcarbamoyl)anilino)pyrimidine

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(drug; imidazo-5-yl-2-anilino-pyrimidines as agents for inhibition of cell proliferation)

RN 403792-67-6 CAPLUS

CN Benzamide, 4-[[4-(1,2-dimethyl-1H-imidazol-5-yl)-2-pyrimidinyl]amino]-N-methyl- (9CI) (CA INDEX NAME)



REFERENCE COUNT:

2

THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 15 OF 18 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2001:152681 CAPLUS

DOCUMENT NUMBER: 134:193444

TITLE: Preparation of imidazo[1,2-a]pyridinylpyrimidines and pyrazolo[2,3-a]pyridinylpyrimidines as inhibitors of CDK2, CDK4, and CDK6 cell cycle kinases.

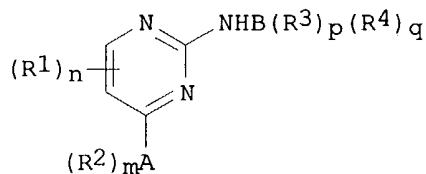
INVENTOR(S): Thomas, Andrew Peter; Breault, Gloria Anne; Beattie, John Franklin; Jewsbury, Phillip John

PATENT ASSIGNEE(S): Astrazeneca AB, Swed.; Astrazeneca UK Limited

SOURCE: PCT Int. Appl., 81 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|--|------------|
| WO 2001014375 | A1 | 20010301 | WO 2000-GB3139 | 20000815 |
| W: | | | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | |
| RW: | | | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | |
| BR 2000013476 | A | 20020430 | BR 2000-13476 | 20000815 |
| EP 1214318 | A1 | 20020619 | EP 2000-953319 | 20000815 |
| EP 1214318 | B1 | 20031008 | | |
| R: | | | AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL | |
| JP 2003507478 | T2 | 20030225 | JP 2001-518706 | 20000815 |
| AU 757639 | B2 | 20030227 | AU 2000-65833 | 20000815 |
| EE 200200080 | A | 20030616 | EE 2002-80 | 20000815 |
| AT 251623 | E | 20031015 | AT 2000-953319 | 20000815 |
| PT 1214318 | T | 20040227 | PT 2000-953319 | 20000815 |
| ES 2208397 | T3 | 20040616 | ES 2000-953319 | 20000815 |
| ZA 2002000028 | A | 20030402 | ZA 2002-28 | 20020102 |
| BG 106383 | A | 20020930 | BG 2002-106383 | 20020204 |
| NO 2002000832 | A | 20020412 | NO 2002-832 | 20020220 |
| HK 1045510 | A1 | 20040319 | HK 2002-107002 | 20020925 |
| PRIORITY APPLN. INFO.: | | | GB 1999-19778 | A 19990821 |
| | | | WO 2000-GB3139 | W 20000815 |

OTHER SOURCE(S): MARPAT 134:193444
 GI



AB Title compds. [I; A = imidazo[1,2a]pyrid-3-yl, pyrazolo[2,3a]pyrid-3-yl; R1 = halo, NO2, cyano, OH, CF3, OCF3, amino, CO2H, sulfamoyl, (substituted) alkyl, alkenyl, alkynyl, alkoxy, alkanoyl, alkanoyloxy, Ph, heterocyclyl, etc.; R2 = halo, NO2, cyano, OH, CF3, OCF3, amino, CO2H, SH, carbamoyl, sulfamoyl, (substituted) alkyl, alkenyl, alkynyl, alkoxy, Ph, heterocyclyl, PhS, etc.; R3 = halo, NO2, cyano, OH, amino, CO2H, carbamoyl, SH, sulfamoyl, alkenyl, alkynyl; m = 0-5; n = 0-2; Ring B = Ph or Ph fused to a C5-7 cycloalkyl ring; p = 0-4; R4 = AE; A = (substituted) alkyl, Ph, heterocyclyl, cycloalkyl, phenylalkyl, heterocyclylalkyl, cycloalkylcycloalkyl; E = bond, O, CO, CO2, NRaCO, NRa, S, SO, SO2, SO2NRa; q = 0-2; p+q≤5], were prepared Thus, NaH was added to

3-chloroaniline in N-methylpyrrolidone; after 30 min. 4-(2-methylimidazo[1,2-a]pyridin-3-yl)-2-methylthiopyrimidine (preparation given) in N-methylpyrrolidone was added and the mixture was heated at 150° for 3 h to give 21% 2-(3-chloroanilino)-4-(2-methylimidazo[1,2-a]pyrid-3-yl)pyrimidine. 2-[4-(2-Diethylaminoethoxy)anilino]-4-(imidazo[1,2-a]pyrid-3-yl)pyrimidine showed CDK2 inhibitory activity with IC₅₀ = 0.17 μM.

IT 328061-72-9P 328061-73-0P 328062-00-6P

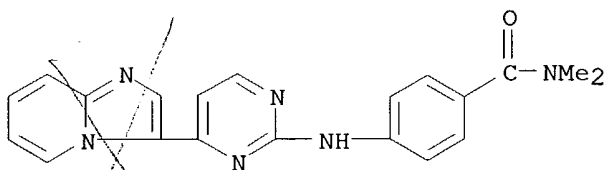
328062-01-7P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of imidazo[1,2-a]pyridinylpyrimidines and pyrazolo[2,3-a]pyridinylpyrimidines as inhibitors of CDK2, CDK4, and CDK6 cell cycle kinases)

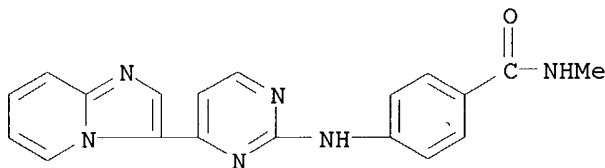
RN 328061-72-9 CAPLUS

CN Benzamide, 4-[(4-imidazo[1,2-a]pyridin-3-yl-2-pyrimidinyl)amino]-N,N-dimethyl- (9CI) (CA INDEX NAME)



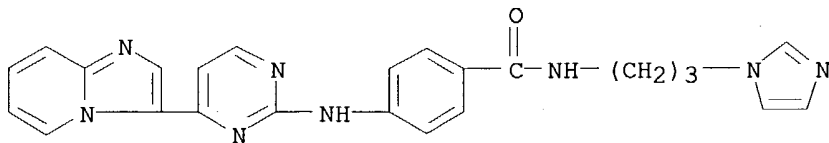
RN 328061-73-0 CAPLUS

CN Benzamide, 4-[(4-imidazo[1,2-a]pyridin-3-yl-2-pyrimidinyl)amino]-N-methyl- (9CI) (CA INDEX NAME)



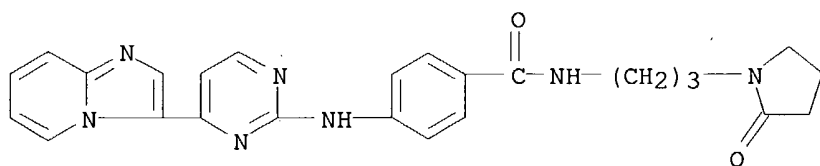
RN 328062-00-6 CAPLUS

CN Benzamide, 4-[(4-imidazo[1,2-a]pyridin-3-yl-2-pyrimidinyl)amino]-N-[3-(1H-imidazol-1-yl)propyl]- (9CI) (CA INDEX NAME)



RN 328062-01-7 CAPLUS

CN Benzamide, 4-[(4-imidazo[1,2-a]pyridin-3-yl-2-pyrimidinyl)amino]-N-[3-(2-oxo-1-pyrrolidinyl)propyl]- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 16 OF 18 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2001:137207 CAPLUS

DOCUMENT NUMBER: 134:178569

TITLE: Preparation of as isoxazolylypyrimidines and related compounds as inhibitors of c-JUN N-terminal kinases and other protein kinases.

INVENTOR(S): Green, Jeremy; Bemis, Guy; Grillot, Anne-Laure; Ledebouer, Mark; Salituro, Francis; Harrington, Edmund; Gao, Huai; Baker, Christopher; Cao, Jingrong; Hale, Michael

PATENT ASSIGNEE(S): Vertex Pharmaceuticals Incorporated, USA

SOURCE: PCT Int. Appl., 96 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

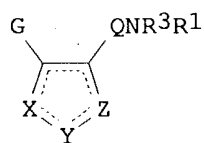
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

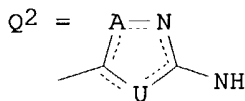
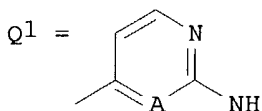
| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|--|----------|-----------------|------------|
| WO 2001012621 | A1 | 20010222 | WO 2000-US22445 | 20000811 |
| W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | |
| RW: | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | |
| EP 1218369 | A1 | 20020703 | EP 2000-957485 | 20000811 |
| R: | AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL | | | |
| BR 2000013551 | A | 20030617 | BR 2000-13551 | 20000811 |
| JP 2003531103 | T2 | 20031021 | JP 2001-517519 | 20000811 |
| NO 2002000713 | A | 20020412 | NO 2002-713 | 20020212 |
| US 2003149051 | A1 | 20030807 | US 2002-74177 | 20020212 |
| US 6693108 | B2 | 20040217 | | |
| ZA 2002001248 | A | 20030220 | ZA 2002-1248 | 20020213 |
| PRIORITY APPLN. INFO.: | | | US 1999-148795P | P 19990812 |
| | | | US 1999-166922P | P 19991122 |
| | | | US 2000-211517P | P 20000614 |
| | | | WO 2000-US22445 | W 20000811 |

OTHER SOURCE(S): MARPAT 134:178569

GI



I



AB Title compds. [I; XYZ = NOCR2, ON:CR2, N:NNR3, OC(R2):CR2, NN(R3)CR2; R1 = H, CONH2, TnR, TnAr2; R = (substituted) alipharyl; n = 0, 1; T = CO, CO2, CONH, SO2, SO2NH, COCH2, CH2; R2 = H, R, CH2OR, CH2OH, CHO, CH2SR, CH2SO2R, CH2NH2, CH2CN, (substituted) aryl, arylmethyl, heterocyclyl, heterocyclylmethyl, etc.; R3 = H, R, COR, CO2R, SO2R; G = R, Ar1; Ar1 = (substituted) (fused) aryl, aralkyl, heterocyclyl; Q = Q1, Q2; A = N, CR3; U = CR3, O, S, NR3; Ar2 = (substituted) (fused) aryl, heterocyclyl], were prepared Thus, 4-(5-methyl-3-phenylisoxazole-4-yl)pyrimidin-2-ylamine (preparation given) was refluxed with PhBr, tris(dibenzylideneacetone)dipalladium, BINAP, and NaOCMe3 were refluxed together for 16 h to give 36% 4-(5-methyl-3-phenylisoxazole-4-yl)pyrimidin-2-ylphenylamine. Several I inhibited KINK3 at <0.1 μ M.

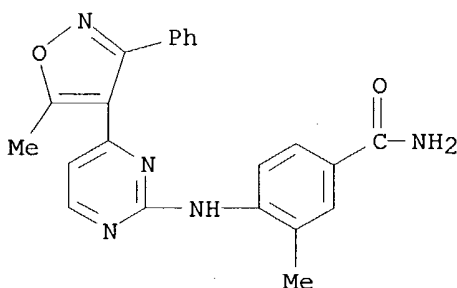
IT **326818-24-0**

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(preparation of as isoxazolylpyrimidines and related compds. as inhibitors of c-JUN N-terminal kinases and other protein kinases)

RN 326818-24-0 CAPLUS

CN Benzamide, 3-methyl-4-[[4-(5-methyl-3-phenyl-4-isoxazolyl)-2-pyrimidinyl]amino]- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 17 OF 18 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1998:293493 CAPLUS

DOCUMENT NUMBER: 129:4655

TITLE: 2-Pyrimidineamines and their preparation

INVENTOR(S): Davis, Peter David; Moffat, David Festus Charles; Batchelor, Mark James; Hutchings, Martin Clive; Parry, David Mark

PATENT ASSIGNEE(S): Celltech Therapeutics Ltd., UK; Davis, Peter David; Moffat, David Festus Charles; Batchelor, Mark James; Hutchings, Martin Clive; Parry, David Mark

SOURCE: PCT Int. Appl., 58 pp.

CODEN: PIXXD2

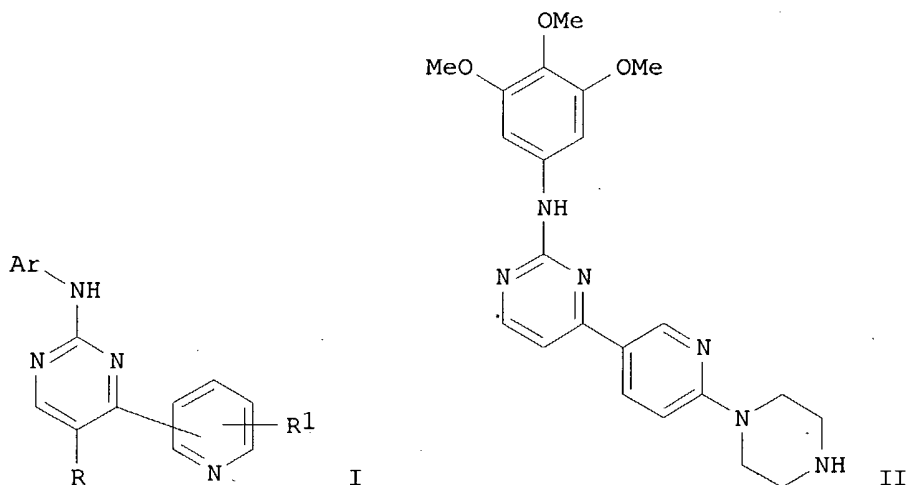
DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|----------------------------|
| WO 9818782 | A1 | 19980507 | WO 1997-GB2949 | 19971027 |
| W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG | | | | |
| AU 9749540 | A1 | 19980522 | AU 1997-49540 | 19971027 |
| AU 732155 | B2 | 20010412 | | |
| EP 934304 | A1 | 19990811 | EP 1997-912296 | 19971027 |
| EP 934304 | B1 | 20030226 | | |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI | | | | |
| US 6114333 | A | 20000905 | US 1997-958419 | 19971027 |
| JP 2001503047 | T2 | 20010306 | JP 1998-520184 | 19971027 |
| AT 233256 | E | 20030315 | AT 1997-912296 | 19971027 |
| ES 2193362 | T3 | 20031101 | ES 1997-912296 | 19971027 |
| US 6552029 | B1 | 20030422 | US 1999-420755 | 19991020 |
| PRIORITY APPLN. INFO.: | | | | GB 1996-22363 A 19961028 |
| | | | | US 1997-958419 A1 19971027 |
| | | | | WO 1997-GB2949 W 19971027 |

OTHER SOURCE(S): MARPAT 129:4655
GI

AB The title compds. [I; Ar = (un)substituted aromatic group; R = H, halo, ZR₂; R₁ = (un)substituted heterocyclyl; R₂ = (un)substituted alk(en)yl or alkynyl; Z = bond, linker atom or group] and their salts, solvates, hydrates and N-oxides, selective inhibitors of tyrosine kinases ZAP-70 and Syk (no data), useful in the prophylaxis and treatment of immune or allergic diseases and diseases involving inappropriate platelet activation, were prepared. Pharmaceutical compns. containing I are also claimed.

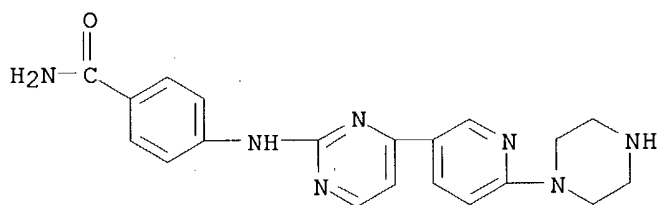
For example, refluxing a solution of 3,4,5-trimethoxyphenylguanidine, 1-(2-chloropyridin-5-yl)-3-dimethylamino-2-propen-1-one [preparation from 5-acetyl-2-chloropyridine and Me₂NCH(OEt)₂ given] and NaOH in Me₂CHOH gave 4-(2-chloropyridin-5-yl)-N-(3,4,5-trimethoxyphenyl)-2-pyridineamine which was heated with piperazine at 140° to give a title compound II (m. 134-135°).

IT 207283-10-1P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(2-pyrimidineamines and their preparation)

RN 207283-10-1 CAPLUS

CN Benzamide, 4-[[4-[6-(1-piperazinyl)-3-pyridinyl]-2-pyrimidinyl]amino]-
(9CI) (CA INDEX NAME)



REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 18 OF 18 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1988:112478 CAPLUS

DOCUMENT NUMBER: 108:112478

TITLE: Preparation of 4,5,6-substituted 2-pyrimidinamines as allergy inhibitors, antiasthmatics, and hypoglycemics

INVENTOR(S): Torley, Lawrence Wayne; Johnson, Bernard B.; Dusza, John Paul

PATENT ASSIGNEE(S): American Cyanamid Co., USA

SOURCE: Eur. Pat. Appl., 94 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

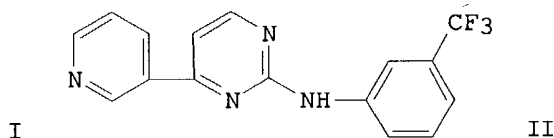
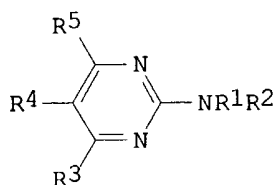
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|----------|
| EP 233461 | A2 | 19870826 | EP 1987-100277 | 19870112 |
| EP 233461 | A3 | 19880525 | | |
| EP 233461 | B1 | 19960320 | | |
| EP 233461 | B2 | 20020529 | | |
| R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, NL, SE | | | | |
| US 4788195 | A | 19881129 | US 1986-927572 | 19861106 |
| AT 135699 | E | 19960415 | AT 1987-100277 | 19870112 |
| ES 2087056 | T3 | 19960716 | ES 1987-100277 | 19870112 |
| DK 8700151 | A | 19870714 | DK 1987-151 | 19870113 |
| DK 171251 | B1 | 19960812 | | |
| FI 8700113 | A | 19870714 | FI 1987-113 | 19870113 |
| FI 91150 | B | 19940215 | | |
| FI 91150 | C | 19940525 | | |
| AU 8767518 | A1 | 19870716 | AU 1987-67518 | 19870113 |
| AU 591223 | B2 | 19891130 | | |

| | | | | |
|------------------------|----|----------|---------------------|-------------|
| ZA 8700219 | A | 19870826 | ZA 1987-219 | 19870113 |
| JP 62223177 | A2 | 19871001 | JP 1987-5867 | 19870113 |
| JP 07080857 | B4 | 19950830 | | |
| HU 43582 | A2 | 19871130 | HU 1987-100 | 19870113 |
| HU 198708 | B | 19891128 | | |
| CA 1320201 | A1 | 19930713 | CA 1987-527173 | 19870113 |
| US 4876252 | A | 19891024 | US 1988-194751 | 19880517 |
| AU 9050578 | A1 | 19900726 | AU 1990-50578 | 19900228 |
| AU 621461 | B2 | 19920312 | | |
| PRIORITY APPLN. INFO.: | | | US 1986-817951 | A 19860113 |
| | | | US 1986-927572 | A3 19861106 |
| OTHER SOURCE(S): | | | CASREACT 108:112478 | |
| GI | | | | |



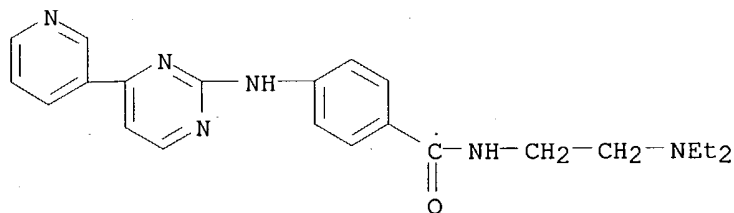
AB The title compds. [I; R1 = H, C1-3 alkyl, EtO2CCO, Et2NCH2CH2; R2 = substituted Ph; R3 = Me2NC6H4, AcNMeC6H4, (un)substituted furanyl, thienyl, N-containing heteroaryl; R4, R5 = H, C1-3 alkyl] and their pharmacol. acceptable salts were prepared for treating asthma and allergic diseases, inflammation, and diabetes mellitus. A mixture of 7.04 g 3-(dimethylamino)-1-(3-pyridinyl)-2-propen-1-one and 18.72 g 3-F3CC6H4NHC(:NH)NH2.H2CO3 was refluxed 16 h in ProH to give 5.55 g pyridinylpyrimidinamine II. II inhibited histamine release from immunol. stimulated human basophils with an IC50 of 0.7 μ M. II also gave 58.1% inhibition of lipoxigenase activity in guinea pig neutrophils at 10 μ g/mL.

IT **112676-85-4P 112676-86-5P**

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (preparation of, as drug)

RN 112676-85-4 CAPLUS

CN Benzamide, N-[2-(diethylamino)ethyl]-4-[[4-(3-pyridinyl)-2-pyrimidinyl]amino]- (9CI) (CA INDEX NAME)



RN 112676-86-5 CAPLUS

CN Benzamide, N-methyl-4-[[4-(3-pyridinyl)-2-pyrimidinyl]amino]- (9CI) (CA INDEX NAME)

10/004,642

